APPELLANT'S BRIEF AND APPENDICES

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Richard Heinen	)	Confirmation No. 9693
For: ELONGATED BLOCK TIRE TREAD	)	Docket No. DN2004013 Art Unit: 1733
Serial No.: 10/775,795	)	Examiner: Steven D. Maki
Filed: February 10, 2004	)	

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Mail Stop Appeal Briefs – Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

APPELLANT'S BRIEF

Dear Sir:

Appellant, by virtue of his Notice of Appeal filed February 1, 2007, hereby files his Appeal Brief in response to the Final Rejection of all pending claims in the above-identified application. The Commissioner is hereby authorized to charge the fee of Five Hundred Dollars and 00/100 ($500.00) to Appellant's Deposit Account No. 07-1725. The Commissioner is also authorized to charge any additional filing fees which may be required or to refund any overpayment to Account No. 07-1725. Triplicate copies of this letter are enclosed.

I. Real Party in Interest

The real party in interest of the present application is The Goodyear Tire & Rubber Company.

II. Related Appeals and Interferences

There are no related appeals or interferences.

III. Status of Claims

Claims 1 to 21 remain pending in the application after the final rejection mailed October 4, 2006 and are subject to this Appeal.

IV. Status of Amendments

There are no outstanding amendments. No amendments have been filed subsequent to the Final Office Action mailed on October 4, 2006.

V. Summary of Claimed Subject Matter

Claims 1 and 21 are the independent claims pending in the application. Claims 2 – 20 depend from independent claim 1.

Claim 1 is directed to a pneumatic tire having a tread (Figure 2). The tread has two circumferential grooves 14, 16 and a circumferentially extending column 24 of tetragon shaped blocks 28 located between the two circumferential grooves 14, 16 (para 0017; Figure 1). In the circumferential extending column 24 of blocks 28, each block 28 is separated from an adjacent block 28 by an inclined lateral groove 30 (para 0017), the inclined lateral groove forming an angle between 10° to 25° with one of the circumferential grooves 14 or 16 (para 0019). Each block 28 in the column 24 has a circumferential length L at least equal to the normal pressure footprint length L_F of the tire (para 0021). The length of the blocks permits the column of adjacent blocks to act as a rib while maintaining desired block characteristics.

Independent claim 21 is also directed to a pneumatic tire having a tread (Figure 2). The tread is divided at the tread centerline CL into two tread halves (Figure 1), with the tread having a single circumferentially extending column 24 of tetragon shaped blocks 28 (para 0017) located only in one tread half (see Figure 1). In the circumferential extending column 24 of blocks 28, each block 28 is separated from an adjacent block 28 by an inclined lateral groove 30 (para 0017), the inclined lateral groove forming an angle between 10° to 25° with one of the circumferential grooves 14 or 16 (para 0019). Each block 28 in the column 24 has a circumferential length L at least equal to the normal pressure footprint length L_F of the tire (para 0021).

VI. Grounds of Rejection to be Reviewed on Appeal

A. Whether claims 1, 5, 10-12, 15-16 and 19-20 are unpatentable under 35 U.S.C. 103(a) over Europe 890456 in view of at least one of Japan 6-135207, WO 00/30874 (Cesarini et al.) and US 6109317 (Iwamura et al.).

B. Whether claims 1, 5-7, 11-12, 15-16, 20 and 21 are unpatentable under 35 U.S.C. 103(a) over Japan 11-5413 in view of at least one of Japan 6-135207, WO 00/30874 (Cesarini et al.) and US 6109317 (Iwamura et al.).

VII. Arguments

All of the claims currently pending stand rejected under 35 U.S.C. § 103(a) as obvious over the cited prior art. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP §2143. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 180 USPQ 580 (CCPA 1974). The mere fact that elements of a claimed invention are known in the art is not, of itself, sufficient basis for an obviousness rejection. In re Katzab, 55 USPQ2d 1313 (Fed. Cir. 2000); MPEP §2143.01. Rather, there must be some motivation, teaching or suggestion in the prior art to make the combination, either explicitly or implicitly. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Fritch, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992).

A. Rejection of claims under 35 U.S.C. § 103 (a) over Europe 890456

A1. Rejection of claims 1-20

Claims 1, 5, 10 to 12, 15 to 16, and 19-20 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Europe 890456 in view of at least one of: Japan 6-135207, WO 00/30874 (Cesarini et al.) and US Patent 6109317 (Iwamura et al.).

Claim 1 is the only independent claim of this rejected group and is directed to a pneumatic tire, the tire comprising:

> a tread, the tread comprising two circumferential grooves and a circumferentially extending column of tetragon shaped blocks located between the two circumferential grooves,
>
> in the circumferential extending column of blocks, each block is separated from an adjacent block by an inclined lateral groove, the inclined lateral groove forming an angle between 10° to 25° with one of the circumferential grooves,
>
> the tread being characterized by each block in the column having a circumferential length L at least equal to the normal pressure footprint length L_F of the tire.

Europe 890456 is cited for teaching tetragon shaped blocks (4) separated by "steep slant groove segments" (2) inclined preferably at angles of 10-45° relative to the circumferential direction (col 3, lines 36-46), and having a relatively long circumferential component in comparison to the remaining tread blocks (col 6, lines 42-46). The steep slant groove segments (2) are disposed in the central region of the tire (col 2, lines 3-8), the central region of the tire having a width of 15-45% of the tread width. Europe 890456 further teaches that each side region of the tire is defined by "gentle slant" groove segments (2) inclined at angles of 40-85° relative to the circumferential direction of the tire (col 5, lines 49-54). Europe 890456 is silent about any desired or necessary length of the blocks (4) relative to the circumferential length of the tire tread footprint to achieve any desired tire characteristics.

To overcome the deficiency of Europe 890456, at least one of Japan 6-135207, WO 00/30874 and Iwamura et al. are applied in the rejection. It is held that Europe 890456 has a footprint and the secondary art, when considered individually or collectively motivate one of ordinary skill in the art to provide Europe 890456 with a footprint such that Europe 890456's steeply slanted grooves and central elongated blocks extend completely across the footprint as recited. Appellant respectfully disagrees.

Herein, since the rejection applies the secondary references "in view of at least one of" and provides collective reasoning based on the secondary references, the secondary references will be analyzed both individually and collectively as each pertains to the recited invention and to the primary reference Europe 890456.

Secondary Reference Japan 6-135207

Japan 6-135207 was initially cited as teaching steep slanted grooves, inclined at an angle of 5° to 15° with respect to the circumferential direction, that have a length "longer than the footprint in order to improve water drainage" (10/14/2005 Office Action, paragraph 2, pgs 2-3). In the 4/05/2006 Office Action, Japan 6-135207 is also further cited as teaching a tread for use on wet roads wherein a) the central slant grooves have a length longer than the footprint and b) the footprint contains four shoulder grooves (paragraph 2, pg 3). In the 10/04/2006 Office Action, Japan 6-135207 is cited for "providing a footprint of the tire such that the steeply slanted groove extends completely across the length of the footprint," presumably to move water from the footprint (paragraph 2, pg 4).

Thus, in the arguments presented, the focus of the teachings of Japan 6-135207 has shifted from teaching that the grooves must be longer than the footprint to a teaching that the footprint must be sized so that the leading and trailing edges of the footprint cross the steeply slanted grooves – all for the purpose of improving water drainage. However, both of these simple assertions about Japan 6-135207 are misleading about what is and what is not taught by Japan 6-135207 and what teachings one skilled in the art would apply to Europe 890456.

The goal of Japan 6-135207 is a tire that has improved wandering performance while also obtaining good wet performance. To accomplish this, the tread is provided with a straight groove 19L and 19R on each side of the equatorial plane to provide drainage for the tire (translation paragraph 0008). The edges 25L of the straight grooves along the edges of the blocks bordering the grooves are phase sifted and have an inclination angle of about 2° (translation paragraphs 007 and 012). In the exemplary tread configuration of Figure 1, Japan 6-135207 teaches that the center rib block group is formed by a series of repeating blocks 121A-121E (translation paragraph 0011). The repeating series of blocks are located between inclined major grooves 26, inclined at 15° relative to the circumferential direction of the tread (translation paragraph 0013). For the illustrated tread, due to the inclination angle of the major grooves 26, the circumferential spacing between the grooves 26, and the width of the center rib block formed by the repeating block series (the tread center as measured between the circumferential grooves 19L and 19R is equal to approximately 53% of the tread width – this measurement being done in the same manner as done by EP 890456, using Figure 2 of Japan 6-135207), the major grooves 26 have a length extending greater than the footprint length, as seen in Figure 1.

Japan 6-135207 provides no specific teaching why the groove 26 must have a length greater than the footprint length or why the footprint must be of a dimension such that the footprint length is less than the groove length. And Japan 6-135207 certainly does not teach any desired relationship between a single block length and the footprint length as recited by Applicant. Regarding the noted benefit of "water drainage" as cited in the rejection, Japan 6-135207 teaches that this benefit is achieved by inclining the block edges 23L and 24L that form the straight circumferential grooves – not by the length or the inclination angle of the major groove 26. Japan 6-135207 teaches that the same wet and wandering performance can also be achieved by modifying the major grooves of the treads illustrated in Figures 3 and 4 – treads that have no steeply slanted grooves therein. Thus, contrary to the assertions in the rejection, Japan fails to teach improved water drainage of the tread due to any presumed relationship between the length of the slant groove 26 and the footprint length.

To establish *prima facie* obviousness, there must be motivation to combine the teachings and a reasonable expectation of success. First, it has been repeatedly noted that the motivation to combine the teachings of Japan 6-135207 with Europe 890456 is to improve the water drainage as taught by Japan 6-135207. However, nowhere in the teachings of Japan 6-135207 is a length relationship between the groove 26 and the footprint taught to provide the asserted water drainage benefits. All of the water drainage benefits taught by Japan 6-135207 are from the inclination and phase shift of the tread block edges forming the main circumferential grooves. Thus, one skilled in the art seeking to improve the water drainage of Europe 890456 based on the teachings of Japan 6-135207 would instead be directed to modify the circumferential edges of blocks 51 that form the continuous circumferential grooves 1 of Europe 890456.

Second, in Japan 6-135207, the groove length is also a factor of the width of the center rib block group, the center rib block forming the center 53% of the tread, as discussed above. Europe 890456 teaches that the tread center has a maximum width of 45% of the tread width. To combine the selected illustrated tread features of Japan 6-135207 to Europe 890456, one would have to increase the width of the tread center section of Europe 890456, but this is contrary to teachings of Europe 890456. One might also have to increase the spacing between the grooves of Europe 890456 to achieve Japan 6-135207's illustrated ratio of one steeply slanted groove to every four gently slanted shoulder grooves, but this is also contrary to the explicit teachings of Europe 890456 who desires a spacing of only one steeply slanted groove to every two gently slanted grooves. Thus to attempt to combine any

additional teachings regarding the groove configuration to Europe 890456, based upon the illustrated tread of Japan 6-135207, would all be contrary to the teachings of Europe 890456 – thus there is no motivation to combine these references and no reasonable expectation of success.

In using Japan 6-135207, the disclosure of Japan 6-135207 is employed for teachings that are not discussed by Japan 6-135207 and then non-taught benefits are ascribed to these non-discussed teachings. This suggests the use of hindsight to reject the claimed invention, and is contrary to the court's ruling that in rejecting an invention one "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." Ecolochem, Inc. v. Southern California Edison Co., 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000)(quoting In re Fine, 837 F.2d 1071, 1075 (Fed. Cir. 1988)).

In KSR Int'l v. Teleflex, Inc., 550 U.S. ___ (2007), while the court held that an obviousness analysis "cannot be confined by a formalistic conception," there must still be teaching, suggestion, or motivation in the prior art that would suggest to one skilled in the art to make the combination proposed in the rejection to render a claimed invention obvious and explicit reasons for combining prior art must be provided. As noted above, while Japan 6-135207 discloses a long slanted groove having a length greater than a single illustrated footprint length, there is no teaching in Japan 6-135207 for the illustrated tread configuration – this is especially valid in light of Japan 6-135207's teaching that any disclosed water drainage benefits are achieved in a tread pattern that does not have a slanted groove with a length greater than a footprint length. Any explicit reasons set forth in the rejection based solely on Japan 6-135207 is purely speculative.

Secondary Reference WO 00/30874

WO 00/30874 was incorporated into the rejection based on Europe 890456 in the April 05, 2006 Office Action for the "suggestion to provide a pneumatic car tire for use on wet roads with a footprint such that the central slant grooves have a length longer than the footprint so as to be able to drain water underneath the tire footprint" (paragraph 2) In the Final Office Action, WO 00/30874 is cited for the same reasons and is held to inform one in the art that water can be drained from a steeply slanted groove if the groove extends across the full footprint length (page 6).

WO 00/30874 teaches forming central grooves having a length greater than the footprint length of the tire, the taught length to "allow the flowing out of the water contained

in the closed portion of the groove" (pg 15, lines 20-27). The primary reason that WO 00/30874 *must* have a groove with such a length is that WO 00/30874 specifically teaches that the tread should have NO circumferential grooves of any type therein, nor should any of the grooves in the tread communicate with each other (pg 7, lines 20-22; pg 6, lines 2-6) – thus there is no other way for water to be evacuated from the footprint of WO 00/30874. Furthermore, WO 00/30874 specifically teaches the elimination of all "isolated blocks" in the tread (pg 6, lines 6-10).

To establish *prima facie* obviousness, there 1) must be some suggestion or motivation in the art to modify or combine the Europe 890456 and WO 00/30874; 2) must be a reasonable expectation of success from the combination of Europe 890456 and WO 00/30874; and 3) the combined references must teach or suggest all the claim limitations. Graham v. Deere.

Despite Europe 890456's desire to have a tire "for use on wet roads," one skilled in the art would readily appreciate that any teachings of WO 00/30874 regarding having closed *grooves* longer than the footprint are not applicable to the tread of Europe 890456. The tread of Europe 890456 is replete with isolated blocks separated by circumferentially continuous grooves that facilitate the removal of water from the footprint, and has no closed grooves. Despite the assertions in the rejections, there is no need for one skilled in the art to look to the teachings of WO 00/30874 regarding the groove or footprint length; *i.e.*, there is absolutely no motivation to combine the teachings as Europe 890456 already has means via the continuous circumferential grooves that communicate with lateral grooves to move water out of the footprint.

Additionally, the combined teachings of Europe 890456 and WO 00/30874 fail to teach or suggest all the claimed limitations, even if such teachings were combinable for the reasons alluded to in the rejection. WO 00/30874 fails to teach forming *blocks* having a length greater than the footprint length. And as WO 00/30874 teaches against forming any isolated blocks in the tread, it is highly unlikely that one skilled in the art would achieve Applicant's recited tire by a combination of Europe 890456 and WO 00/30874.

As noted above, the majority of the teachings of WO 00/30874 are specifically contrary to the disclosed tread of Europe 890456. The courts have held "as a 'useful general rule,' that references that teach away cannot serve to create a *prima facie* case of obviousness. In re Gurley, 27 F.3d 551, 553, 31 U.S.P.Q. 1131, 1132 (Fed. Cir. 1994). WO 00/30874 clearly teaches away from the entire tread design of Europe 890456. WO

00/30874 is not applicable art to the tire of Europe 890456 and should be withdrawn as prior art in any rejection that combines it with Europe 890456.

In part of the rejection, WO 00/30874 is used to overcome the deficiency of the lack of teachings in Japan 6-135207 in regards to water drainage if the groove length is greater than the length of the footprint. Appellant acknowledges that WO 00/30874 does teach that a steeply inclined groove that crosses the footprint leading and trailing edges does indeed drain water out of the tread footprint. However, similar to the tread of Europe 890456, the tread of Japan 6-135207 does not suffer from the problem of no water drainage being resolved by WO 00/30874. The treads of both Europe 890456 and Japan 6-135207 have continuous circumferential grooves [grooves 1 in Europe 890456 and 19L and 19R of Japan 6-135207] that provide for constant water evacuation from the tread. And both treads also have side edge lateral grooves [grooves 3 in Europe 890456 and the grooves between blocks 122 in Japan 6-135207] that communicate with the continuous circumferential grooves that permit water to flow laterally for evacuation from the tread footprint.

As neither Europe 890456 nor Japan 6-135207 are deficient in the noted problem of WO 00/30874, and WO 00/30874 specifically teaches a tread configuration that is explicitly contrary to both Europe 890456 and Japan 6-135207, there is no motivation in these references to combine the teachings of WO 00/30874 with Europe 890456 and Japan 6-135207. In "casting the mind back to the time of the invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field", See In re Dembiczak, 175 F. 3d 994, 999 50 USPQ2d 1614, 1617 (Fed Cir. 1999), as required in an analysis under 35 U.S.C. § 103, one skilled in the art looking to modify Europe 890456 or provide reasoning for the formation of the slant groove of Japan 6-135207 would not look at the teachings of WO 00/30874 as the teachings are contrary.

Simply because the teachings may be combined in a rejection, it does not necessarily result in *prima facie* obviousness. There must also be motivation to combine, and herein, there is none and the rejection using WO 00/30874 necessarily fails. The use of WO 00/30874 to reject the present claims is another example of using hindsight reconstruction to cherry-pick among all the teachings of a reference while ignoring all of the negative or contrary teachings of the reference.

The use of this reference both individually and collectively in the rejection should be reconsidered and withdrawn.

Secondary Reference Iwamura et al. (US 6,109,317)

In the 10/04/2006 Office Action, Iwamura et al. is cited for "providing the footprint of the tire such that a steeply slanted groove extends completely across the length of the footprint (figure 3)" (paragraph 2, pg 4). Figure 3 of Iwamura et al. is relied upon in the rejections. The central tread feature of the tire of Iwamura et al. is a continuous rib structure, wherein the grooves 2 "start adjacent to the tire equator C with a small spacing therefrom" (see Figure 1 and col 3, lines 55-60) and have identified axially inner closed ends 2i (col 3, lines 65-67). Thus, the circumferentially adjacent tread elements are connected to one another and do not form independent blocks of the type disclosed by Europe 890456. Contrary to the rejection, Iwamura is silent as to an exact reason for the *length* of the footprint relative to the length of the slant grooves. What Iwamura et al. does specifically teach is that the steeply slanted grooves 2 are arranged "such that at least five, preferably six or more main grooves 2 *always* appear in the ground contact patch during running" (emphasis added; col 5, lines 31-35).

In a tread of Europe 890456, modified by the teachings of Iwamura et al. to have the requisite number of steeply slanted grooves in the footprint (as actually taught by Iwamura et al.), the resulting tread/footprint would a) have a footprint length longer than the illustrated tread of Figure 1 of Europe 890456 (not really a possibility due to the nature of a tire), or b) the blocks would have to have a shorter circumferential length to ensure that there are at least portions of five main grooves in the footprint. For such a modified tire, with a shorter block length to achieve the requisite number of slant grooves, there is no certainty that the block length would not be less than the footprint length as required in Appellant's claim. Even if the tread center TC of Europe 890456 were made wider to more easily accommodate portions of at least five main grooves in the footprint, the total circumferential length of the blocks becomes even shorter and less than the footprint length. Thus, there is no certainty that the tire of Europe 890456 modified by Iwamura et al. would result in a tire with a tread having all of the limitations of the appealed independent claim 1, required to establish *prima facie* obviousness.

Additionally, structurally, the treads of Europe 890456 and Iwamura et al. are distinct enough from one another – Europe 890456 has single inclination grooves that cross the center line to form blocks while Iwamura et al. has a center rib with multi-angled opposing inclination grooves - that one skilled in the art would not look to combine any specific

teachings regarding the center grooves, and for the reasons pointed out above, the combination of references fails to yield a reasonable expectation of success. There are opposing teachings in the references regarding the groove and center tread structure and there is a lack of suggestion or motivation in either reference to modify or combine the references. Thus the rejection of claim 1 of Europe 890456 as modified by Iwamura et al. fails to establish *prima facie* obviousness under the Graham v. Deere standards.

Secondary References Combined

When the secondary references are considered collectively, any motivation to modify the tire of Europe 890456 (and it would be a modification to the tire itself, not just to the tire tread, in order to achieve a desired footprint) to achieve the footprint length asserted as obvious in the rejection relies solely on the teachings of WO 00/30874. As noted above, neither Japan 6-135207 nor Iwamura et al. provide any motivational teaching about the footprint length relative to the central steeply slanted groove or block length. The sole repository for such teaching is found in WO 00/30874 – thus, teachings from WO 00/30874 must be imported into the knowledge taught by Japan 6-135207 and Iwamura et al. Thus, the rejection of the recited invention based on taking the secondary references collectively hinges upon WO 00/30874.

However, even with the court ruling in KSR that an obviousness analysis cannot be confined by a formalistic conception, there still must be motivation to combine the teachings of WO 00/30874 into the teachings of the other secondary references, and the contrary teachings of a reference cannot be ignored to achieve an explicit reason for combining references. As discussed above, WO 00/30874 is directed to ensuring water flow out of a footprint that has no isolated blocks, continuous circumferential grooves, or connected grooves. Neither Japan 6-135207 nor Iwamura et al. disclose treads that have the same deficiency as the prior art tread of WO 00/30874 that WO 00/30874 seeks to remedy with his teachings. Both Japan 6-135207 and Iwamura et al. disclose treads that provide numerous other paths for water evacuation. One skilled in the art looking at the entirety of the teachings of WO 00/30874 would not be directed to use such teachings in the tire or tread of either of the other two secondary references. As noted above, as directed by the court, negative or contrary teachings in a single reference cannot be disregarded in order to make a combined reference rejection under 35 U.S.C. § 103. This is not an anticipatory rejection wherein any negative teachings can be ignored if the sole reference still discloses the claimed

invention. The contrary teachings of WO 00/30874 must be considered in determining if the recited invention is *prima facie* obvious.

Thus, even considered collectively the combination of secondary references fails to provide motivation to modify the tire and tread of Europe 890456 and result in Appellant's recited tire.

Final Comments

In the Final Rejection, it is stated that the focus of the rejection, and the secondary art applied therein, is that it would have been obvious to modify or provide the tire of Europe 890456 with a footprint such that the footprint has a length greater than the groove length. Such a modification makes a very broad presumption regarding the footprint shape or length of a tire. The footprint shape and length is determined by a plurality of factors, including but not limited to: internal air pressure, tire load, carcass shape, curing mold shape, tire width, tire aspect ratio, tread configuration, and the tread radius profile. As seen by this list, the footprint shape and length is not solely dictated by the footprint configuration. None of these factors are considered in the rejection or in the prior art. A simple combination of any prior art that illustrates a footprint shape, without any reasoning for the exact footprint length relative to the tread configuration, fails to necessarily result in the claimed invention and would not have rendered the recited invention obvious to one skilled in the art at the time of the invention.

B. Rejection of claims under 35 U.S.C. § 103(a) over Japan 11-5413

B1. Rejection of claims 1-20

Claims 1, 5 to 7, 11 to 12, 15 to 16, and 20 stand rejected under 35 U.S.C. 103(a) as obvious over Japan 11-005413 in view of at least one of Japan 6-135207, WO 00/30874 (Cesarini et al.) and US 6,109,317 (Iwamura et al.). Claim 1 is the independent claim in this rejected group.

Claim 1 is the only independent claim of this rejected group and is directed to a pneumatic tire, the tire comprising:

> a tread, the tread comprising two circumferential grooves and a circumferentially extending column of tetragon shaped blocks located between the two circumferential grooves,

> in the circumferential extending column of blocks, each block is separated from an adjacent block by an inclined lateral groove, the inclined lateral groove forming an angle between 10° to 25° with one of the circumferential grooves,
>
> the tread being characterized by each block in the column having a circumferential length L at least equal to the normal pressure footprint length L_F of the tire.

Japan 11-005413 is cited for teaching a pneumatic tire comprising two rows of tetragon shaped central blocks 8 wherein the blocks 8 are separated by steep slant grooves 6 inclined at angles of 10° to 45° relative to the circumferential direction (paragraph 0011 in translation). The length of the central blocks 8 are two to five times the circumferential length of the side blocks 9 (paragraph 008 in translation). Japan 11-005413 teaches that if the central block length is greater than five times the lateral block length, the block rigidity is too high, and if the length is less than two times the lateral block length, the central block cannot be formed with at least two sipe groups and snow traction is reduced (paragraph 009 in translation). The illustrated tread of Figure 1 shows the central blocks 8 having a circumferential length equal to approximately three times the circumferential length of the lateral blocks 9. Japan 11-005413 also teaches that the narrow width circumferential groove 4 must be formed between the block rows in the tread central region as it raises the water drainage characteristics of the central tread region and its narrow width improves the rigidity of the tread center, thereby improving driving stability (paragraph 0012 in translation). Japan 11-005413 is silent about the circumferential length of the central blocks relative to a footprint length; instead defining the circumferential length relative to the lateral block length.

To overcome the deficiency of Japan 11-005413, at least one of Japan 6-135207, WO 00/30874 and Iwamura et al. are applied in the rejection. In the Final Office Action, Appellant's previous arguments regarding each of the individual references is held to be non-persuasive in light of the secondary art when considered as a whole (2nd paragraph, page 9). However, the secondary references in each rejection are set forth as "in view of at least one of" – indicating that the references may be viewed, and thus argued, individually as that is how the references are being applied in the rejection. This position is further supported by the first presentation of this rejection where it is stated: "AND IN VIEW OF: (2) at least one of ..." and then each reference is cited for what it is asserted to contain (pg 6 of April 5, 2006 Office Action).

Thus, as the Office Actions have opened the door for the references to be taken both individually or collectively, the secondary references will be analyzed both individually and collectively as each pertains to the recited invention and to the primary reference, Japan 11-005413.

Secondary Reference Japan 6-135207

Japan 6-135207 is cited for the suggestion of providing a pneumatic tire for wet roads with central slant grooves that are longer than the footprint length and the footprint length contains up to four shoulder grooves (pg 6 of April 5, 2006 Office Action and maintained in Final Office Action).

In the Office Action it is held that it would have been obvious to form the recited invention in light of Japan 11-005413 teaching a tire intended for use on wet roads and in view of Japan 6-135207 teaching a tire for use on wet roads that has central slant grooves having a length greater than the footprint length and the footprint has four shoulder grooves. Other than an asserted similarity in tread patterns and the fact that both tires will be used on wet roads, no further motivation from the prior art is disclosed as reasoning for applying any alleged teachings of Japan 6-135207 into the tire of Japan 11-005413.

"Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be *some* articulated reasoning with *some* rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F3d 977, 987-88 (quoting *In re Kotzab*, 217 F.3s 1365, 1370 (Fed. Cir. 2000)(emphasis added)). Herein, the rejection is based on purely conclusory statements – that since both treads have slant grooves and both are intended to run on wet roads, they render the recited invention obvious. No motivation provided by the prior art is stated as to what would be improved or enhanced in the tread of Japan 11-005413. In the Final Rejection it is held that no modification to the actual tread configuration of Japan 11-005413 is needed; that only the selection of an appropriate footprint is necessary for the tire of Japan 11-005413. However, Japan 6-135207 provides no motivation for the selection of the particular footprint length or shape illustrated; there is no relationship between the footprint length and any groove length. This position is supported by Japan 6-135207's teaching that the disclosed water drainage benefits can be achieved with the treads of Figures 3 and 4 which do not have any slanted grooves. Any motivation to ascribe the footprint of Japan 6-135207 to the tire of Japan 11-005413 based on the teachings of Japan 6-135207 is purely speculative. As noted above, and set forth in KSR, there must be a

teaching, suggestion, or motivation in the prior art for the combination and the explicit reasons must be provided. Simply because two references may be combined or modified in the manner suggested does not make the modification obvious if there is no suggestion of the desirability of the modification by the prior art, nor any teachings in the prior art as to why to create the combination set forth in the rejection.

In the rejections, the teachings of Japan 6-135207 are noted as being for wet road performance for tires. As Appellant has already discussed, Japan 6-135207's teachings for improved performance for wet roads is directed to inclining the block walls forming the main circumferential grooves – selecting a footprint length relative to any tread feature is never discussed by Japan 6-135207. Were one skilled in the art to modify the tread of Japan 11-005413 to improve water drainage in light of the teachings of Japan 6-135207, one would form the edges of the blocks 8, 9 with small inclination angles that are phase shifted from each other.

Absent any motivation to combine the illustrated footprint of Japan 6-135207 to the tire of Japan 11-005413, *prima facie* obviousness is not established under the necessary requirements of Graham v. Deere.

Secondary Reference WO 00/30874

WO 00/30874 is cited in the rejection as suggesting, for a car tire used on wet roads, a footprint such that the central slant grooves have a length longer than the footprint in order to drain from under the footprint. In the rejections, the singular teaching by WO 00/30874 of the slant groove being longer than the footprint is isolated from the remaining teachings. However, that teaching is integral with the remaining teachings of WO 00/30874 and cannot be viewed in isolation.

In disclosing the relationship between the footprint length and the slant groove lengths, WO 00/30874 teaches that this relationship exists *because* the remaining tread has no circumferential grooves of any type, nor any isolated blocks that require the formation of communicating grooves (pg 7, lines 20-22; pg 6, lines 2-6) that would other provide water evacuation in the tire footprint.

Japan 11-005413 has multiple circumferential grooves and teaches that even the narrow central circumferential grooves must be present to provide water evacuation from the footprint in addition to the four other circumferential grooves present in the illustrated tread.

Just as with the prior rejection based on Europe 890456, herein, the teachings of WO 00/30874 are specifically contrary to the disclosed tread of Japan 11-005413. The courts have held "as a 'useful general rule,' that references that teach away cannot serve to create a *prima facie* case of obviousness. In re Gurley, 27 F.3d 551, 553, 31 U.S.P.Q. 1131, 1132 (Fed. Cir. 1994). WO 00/30874 clearly teaches away from the entire tread design of Japan 11-005413. WO 00/30874 is not applicable art to the tire of Japan 11-005413 and should be withdrawn as prior art in any rejection that combines it with Japan 11-005413.

Secondary Reference Iwamura et al.

Iwamura et al. is applied for suggesting, for tires used on wet roads, to provide a footprint wherein the central slant groove has a length greater than the footprint length "to achieve required water dissipating capability" and wherein the footprint contains four shoulder grooves.

In the cited portion of Iwamura et al., it is taught it is important in the disclosed tread that each main groove have at least one end *in* the ground contact patch (col 2, lines 6-10) to achieve water dissipation. Contrary to the rejection, this is not a requirement that the slant groove has a length greater than the footprint length. Instead, it is a requirement that one termination point of each groove be in the footprint; if the groove were longer than the footprint, there would be no end in the footprint – contrary to the taught important feature of Iwamura et al.

To achieve the goal of the above-noted important feature of Iwamura et al. of a groove end must be in the ground contact patch, in the illustrated tread, the central continuous rib structure has a plurality of grooves 2 that "start adjacent to the tire equator C with a small spacing therefrom" (see Figure 1 and col 3, lines 55-60) and have identified axially inner closed ends 2i (col 3, lines 65-67). It is these closed ends 2i that remain in the ground contact patch. Iwamura et al. teaches arranging steeply slanted grooves 2 "such that at least five, preferably six or more main grooves 2 *always* appear in the ground contact patch during running" (emphasis added; col 5, lines 31-35).

In a tread of Japan 11-5413, modified by the teachings of Iwamura et al., the circumferential length of the blocks 8 of Japan 11-5413 separated by the steeply slanted grooves would have to be shorter to ensure that there are at least portions of five main grooves in the footprint. This also presumes more than two slant grooves on each side of the equatorial plane of the tread of Japan 11-5413, and when more than two slant grooves are in

the footprint on each side of the equatorial plane, the block length between the slant grooves will not be longer than the footprint length, thus the combination of references fails to teach or anticipate the claimed invention.

Thus, not only is the cited reasoning for this combination incorrect and not taught by the references, even if one skilled in the art were to combine the teachings, the tire of Japan 11-5413 as modified by Iwamura et al. would not result in the claimed invention wherein the block length is greater than the footprint length.

Secondary References Taken Collectively

Even when considered collectively, the only reference that teaches the reason set forth in the rejection for having a footprint length less than the length of the steeply slanted grooves is WO 00/30874 – a reference whose primary teachings are contrary to the tread disclosed by Japan 11-5413.

Japan 6-135207 and Iwamura et al. disclose tires designed for improved wet road performance, but neither teaches achieving this by selecting the footprint to have a length less than a particular groove length. While reasoning for obviousness should not be formalistic, there should at least be some teaching, suggestion or motivation in the art collectively to make the changes to the primary reference as suggested, for the reasons suggested in the rejection. Herein, there is none. Thus, even considered collectively the combination of secondary references fails to provide motivation to modify the tire and tread of Japan 11-5413 and result in Appellant's recited tire.

Final Comments

In the Final Office action, it is observed that none of Appellant's arguments describe the length of the footprint of Japan 11-005413. This is simple to answer: because, even as acknowledged in the rejections, Japan 11-005413 itself fails to describe the footprint. If Japan 11-005413 had done so, there would be either no current dispute regarding patentability or it would be potentially framed differently – possibly more directed to a variation in the shape of the footprint than what Japan 11-005413 disclosed. But as Japan 11-005413 fails to describe the footprint, arguments addressing the secondary references and the motivation to combine those references with Japan 11-005413 are more appropriate.

Appellant does acknowledge that the tire of Japan 11-005413 will inherently have a footprint if the tire is operated via ground contact. At issue here, as noted by the rejection, is: what would/should be the shape of that footprint, and what shape (including length) of footprint would have been obvious to one skilled in the art at the time of present invention was made to provide to the tire of Japan 11-005413.

Clearly, the Examiner feels it would have been obvious to one skilled in the art to pluck numerous references that merely illustrate a tread with a central slant groove and a mere illustration of a footprint, containing no actual discussion of the illustrated footprint and its importance to the tread, and a single reference that provides a teaching for a completely different type of tire tread to supply the missing element of Japan 11-005413. Appellant has respectfully disagreed based upon the arguments presented above.

B2. Rejection of claim 21

Claim 21 stands rejected under 35 U.S.C. 103(a) as obvious over Japan 11-5413 in view of at least one of Japan 6-135207, WO 00/30874 (Cesarini et al.) and US 6,109,317 (Iwamura et al.).

Claim 21 is directed to a pneumatic tire, the tire comprising:

> a tread being divided at a tread centerline into two tread halves, the tread comprising a single circumferentially extending column of tetragon shaped blocks located only in one tread half, the column being located between two circumferential grooves, and
>
> in the circumferential extending column of blocks, each block is separated from an adjacent block by an inclined lateral groove, the inclined lateral groove forming an angle between 10° to 25° with one of the circumferential grooves,
>
> each block in the column having a circumferential length L at least equal to the normal pressure footprint length L_F of the tire.

Claim 21 has all of the limitations of claim 1 as argued above, with the further limitations that there is only a single column of tetragon shaped blocks and the column is located in one tread half (as opposed to being located on the tread centerline).

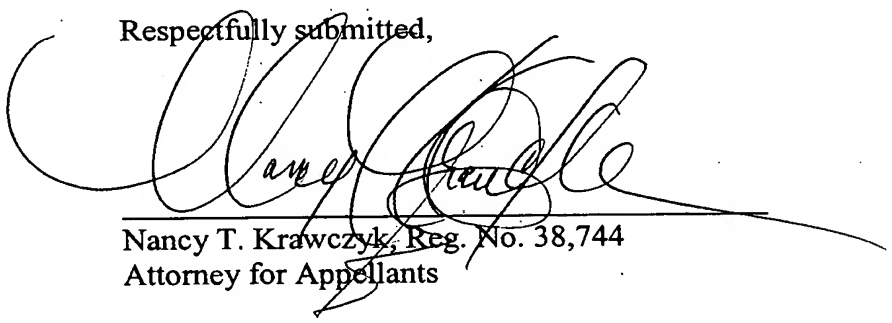
As the rejection against claim 21 is identical to that set forth above regarding claim 1, all of Appellant's arguments set forth above are applicable herein and are fully incorporated into this section by reference thereto.

The only additional argument that need be set forth by Appellant is that Japan 11-5413 discloses two columns of tetragon shaped blocks, with one column in each tread half. Japan 11-5413 never teaches, suggests, or otherwise implies forming an asymmetrical tire tread wherein the tread has only a single column of tetragon shaped blocks located in only one tread half. None of the secondary art suggests such a tread configuration: Japan 6-135207 discloses a column of blocks on the tread equatorial plane; WO 00/30874 discloses there should be no blocks whatsoever in the tread and thus cannot make up for this deficiency of Japan 11-5413; and Iwamura et al. fails to discloses any column of tetragon shaped blocks – the tread center is defined by a rib structure.

The combination of teachings in the cited references fails to teach or disclose all of the claimed limitations of Appellants invention. Thus, it fails to establish *prima facie* obviousness.

It is respectfully requested that the rejections of the claims, as set forth in the Final Office Action be reconsidered in light of the arguments set forth herein and be withdrawn and the claims be indicated allowable over the prior art of record.

Respectfully submitted,



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VIII. Claims Appendix

1. A pneumatic tire, the tire comprising a tread, the tread comprising two circumferential grooves and a circumferentially extending column of tetragon shaped blocks located between the two circumferential grooves,

in the circumferential extending column of blocks, each block is separated from an adjacent block by an inclined lateral groove, the inclined lateral groove forming an angle between 10° to 25° with one of the circumferential grooves,

the tread being characterized by each block in the column having a circumferential length L at least equal to the normal pressure footprint length L_F of the tire.

2. The tire of claim 1 wherein for every straight line drawn in the lateral direction of the tread, the straight line passes through at least two circumferentially adjacent blocks in the circumferentially extending column of blocks.

3. The tire of claim 1 wherein for any straight line drawn in the lateral direction of the tread, the straight line passes through at least three blocks in the circumferentially extending column of blocks.

4. The tire of claim 1 wherein a straight line drawn in the lateral direction of the tire at the mid-length, ½ L, of the block passes through at least three blocks in the circumferentially extending column of blocks.

5. The tire of claim 1 wherein the axial distance between the two circumferential grooves being in the range of 15 to 50% of the tread width.

6. The tire of claim 1 wherein tread is divided at a tread centerline into two tread halves and the two circumferential grooves are located in one tread half.

7. The tire of claim 6 wherein one of the two circumferential grooves is located on the tread centerline.

8. The tire of claim 1 wherein the tread is further comprised of a second circumferentially extending column of parallelogram shaped blocks located between a pair of circumferential grooves, the blocks in the second column being separated by inclined lateral grooves, the inclined lateral grooves in the first column and the inclined lateral grooves in the second column being inclined in opposing directions relative to a tread centerline.

9. The tire of claim 8 wherein the tread is divided at the tread centerline into two tread halves and one of the columns of blocks is located in each tread half.

10. The tire of claim 1 wherein the circumferentially extending column of blocks is axially centered on the equatorial plane of the tire.

11. The tire of claim 1 wherein each block has a pair of opposing sides forming a wall of the circumferential grooves, the pair of sides being circumferentially spaced by a distance f in the range of 20% to 60% of the circumferential length L of the block.

12. The tire of claim 1 wherein each block has a pair of acute angled corners, at least one of the acute angled corners being chamfered.

13. The tire of claim 1 wherein the circumferential grooves have a pair of opposing groove walls, one of the groove walls forming one side of the parallelogram shaped blocks and having a radially outer portion inclined at a greater angle relative to the radial direction of the tire than the radially inner portion of the groove wall.

14. The tire of claim 13 wherein the radially outer portion of the groove wall is inclined at least 10° greater than the radially inner portion of the groove wall.

15. The tire of claim 1 wherein the inclined lateral grooves have a width less than the width of the circumferential grooves.

16. The tire of claim 1 wherein the blocks have a width W_B, measured perpendicular to the longest sides of the blocks, in the range of 15% to 65% the distance between the circumferential grooves.

17. The tire of claim 1 wherein alternating blocks in the circumferentially extending column have different axial widths.

18. The tire of claim 1 wherein alternating blocks in the circumferentially extending column have different circumferential lengths.

19. The tire of claim 1 wherein the tetragon shaped blocks have sides partially forming the two circumferential grooves, and at least one of the sides is inclined at an angle greater than 0° relative to a tread centerline.

20. The tire of claim 1 wherein each block in the column has a circumferential length of 100-400% of the normal pressure footprint length L_F of the tire.

21. A pneumatic tire, the tire comprising a tread, the tread being divided at a tread centerline into two tread halves, the tread comprising a single circumferentially extending column of tetragon shaped blocks located only in one tread half, the column being located between a two circumferential grooves, and

in the circumferential extending column of blocks, each block is separated from an adjacent block by an inclined lateral groove, the inclined lateral groove forming an angle between 10° to 25° with one of the circumferential grooves, each block in the column having a circumferential length L at least equal to the normal pressure footprint length L_F of the tire.

IX. Evidence Appendix

No evidence has been submitted in the present application pursuant to 37 CFR 1.130, 1.131, or 1.132. Nor is there any additional evidenced relied upon by Appellant in the appeal.

X. Related Proceedings Appendix

There are no related proceedings or decisions related to the present case.